

Claims

1 7. The invention as defined in claim 6 where said T-squared filter
2 comprises a software program executed by said computer processing unit.

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Amended

Amend

1 9. The invention as defined in claim 4 wherein data relating to said
2 crystal(s) is stored in the database.

1 10. The invention as defined in claim 1 and comprising a light source
2 directed to said specimen.

1 11. The invention as defined in claim 10 and comprising an optical
2 fiber extending between said light source and said specimen.

1 12. The invention as defined in claim 2 and comprising a computer
2 algorithm executed by said computer processing unit for rating said crystals with
3 respect to predetermined standards.

1 13. The invention as defined in claim 2 and comprising a computer
2 algorithm executed by said computer processing unit for simulating edges of
3 crystals missing in said image generated by said camera.

1 14. The invention as defined in claim 2 wherein said computer
2 processing unit is programmed to determine crystal size by determination of the
3 length of the perimeter of said crystals.

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Claims

1 1. A system for utilizing a digital computer to evaluate microscopic
2 details of at least one crystal, comprising:
3 a camera which generates an output signal representative of an image
4 positioned in a focal plane of the camera,
5 a tray which positions said at least one crystal in said focal plane,
6 a computer processing unit having a persistent storage device, which
7 computer processing unit acquires said output signal from said camera,
8 said computer processing unit being programmed to evaluate said stored
9 image from said camera and for generating a result signal representative thereof,
10 said computer processing unit being programmed to store said result
11 signals in said persistent storage device and performing at least one function
12 selected from the group consisting of: to count crystals, to generate three-
13 dimensional surface plots of crystals within a database, and to determine crystal
14 size by determination of the length of the perimeter of said crystals.

8. The invention as defined in claim 1 and comprising a movable stage for automatically positioning said at least one crystal in said focal plane.

~~5.~~ A system for utilizing a digital computer to evaluate microscopic details of at least one crystal, comprising:

- a camera which generates an output signal representative of an image positioned in a focal plane of the camera,
- a tray which positions said at least one crystal in said focal plane,
- a computer processing unit having a persistent storage device, which computer processing unit acquires said output signal from said camera,
- said computer processing unit being programmed to evaluate said stored image from said camera and for generating a result signal representative thereof,
- said computer processing unit being programmed to store said result signals in said persistent storage device, and
- a T-squared filter to identify said at least one crystal.

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3 a camera which generates an output signal representative of an image
4 positioned in a focal plane of the camera,
5 a tray which positions said at least one crystal in said focal plane,
6 a computer processing unit having a persistent storage device, which
7 computer processing unit acquires said output signal from said camera,
8 said computer processing unit being programmed to evaluate said stored
9 image from said camera and for generating a result signal representative thereof,
10 said computer processing unit being programmed to store said result
11 signals in said persistent storage device, and
12 a computer algorithm executed by said computer processing unit for
13 simulating edges of crystals missing in said image generated by said camera.

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